REMARKS

This is a full and timely response to the non-final Office Action of August 6, 2003. Reexamination, reconsideration, and allowance of the application and all presently pending claims are respectfully requested.

Upon entry of this Second Response, claims 1-61 are pending in this application. Claims 1, 4, 7, 9, 12, 43, and 48 are directly amended herein, and claims 52-61 are newly added. It is believed that the foregoing amendments add no new matter to the present application.

Response to Double Patenting Rejections

It is asserted in the Office Action that claims 1, 15, 18, 21, 43, and 48 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7, 11, and 12 of copending Application No. 09/715,253 ("the '253 application"), claim 2 of copending Application No. 09/715,892 ("the '892 application"), and claim 1 of copending Application No. 09/715,746 ("the '746 application"). Applicants respectfully assert that a double patenting rejection based on a copending application is improper until such application issues into a patent. Thus, Applicants request that the instant application be allowed to issue, notwithstanding the '253, '892, and '746 applications, once the instant application is otherwise within a condition for allowance pursuant to M.P.E.P. §822.01.

Response to §103 Rejections

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, *e.g.*, *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981). In addition, "(t)he PTO has

the burden under section 103 to establish a *prima facie* case of obviousness." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

Claim 1

Claim 1 presently stands rejected under 35 U.S.C. §103 as allegedly being unpatentable over *MacInnis* (U.S. Patent No. 6,573,905) in view of *Jenkins* (U.S. Patent No. 6,111,582). Claim 1, as amended, reads as follows:

> 1. A graphical display system, comprising:
> ***a first graphics pipeline configured to receive graphical data transmitted from a graphics application and to render said graphical data received by said first graphics pipeline;***
> ***a second graphics pipeline configured to receive graphical data transmitted from said graphics application and to render said graphical data received by said second graphics pipeline;***
> a display device configured to display an image; and
> a compositor configured to receive said graphical data rendered by said first graphics pipeline and said graphical data rendered by said second graphics pipeline, said compositor further configured to interface said graphical data received by said compositor with said display device, wherein said image is based on said graphical data rendered by said first graphics pipeline and said graphical data rendered by said second graphics pipeline. (Emphasis added).

Applicants respectfully assert that *MacInnis* fails to disclose at least the features of claim 1 highlighted above.

In this regard, it is asserted in the Office Action that *MacInnis* discloses:

> "a first graphics pipeline (Figure 69, Column 112, lines 24-33) configured to receive graphical data transmitted from a graphics application... and to render said graphical data received by said first graphics pipeline (Figure 69, Column 112, lines 24-33); a second graphics pipeline configured to receive graphical data transmitted from said graphics application and to render said graphical data receive by said second graphics pipeline (Figure 69, Column 112, lines 24-33)."

Applicants respectfully traverse the foregoing assertion that the alleged "first graphics pipeline" and "second graphics pipeline" render graphical data transmitted from the ***same*** "graphics application."

In this regard, each of the alleged "pipelines" appears to render graphical data to be displayed in a different window, as compared to the other alleged "pipelines." See Figure 61 and Column 112, lines 24-27. Thus, *MacInnis* appears to suggest using four different "pipelines" to respectively render four different graphical images in four different graphical windows. See Column 112, lines 38-40. However, there is nothing in *MacInnis* to suggest that the images for any two of the windows should be defined by the same "graphics application." In fact, *MacInnis* specifically teaches that multiple "windows" to be blended are created by multiple "software applications." Column 96, lines 41-42. Thus, Applicants respectfully assert that the Office Action fails to establish a *prima facie* case of obviousness with respect to claim 1.

Accordingly, Applicants submit that the rejection of claim 1 is improper and should be withdrawn.

Claims 2-14, 31, 32, 39-42, and 52-61

Claims 2-14, 31, 32, and 39-42 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *MacInnis* in view of *Jenkins*. Furthermore, claims 52-61 have been newly added via the amendments set forth herein. Applicants submit that the pending dependent claims 2-14, 31, 32, 39-42, and 52-61 contain all features of their respective independent claim 1. Since claim 1 should be allowed, as argued hereinabove, pending dependent claims 2-14, 31, 32, 39-42, and 52-61 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore, these dependent claims recite patentably distinct features that make them allowable notwithstanding the allowability of claim 1.

For example, claim 4 presently reads as follows:

> 4. The system of claim 1, wherein:
> ***said first graphics pipeline is configured to super-sample a first portion of a graphical object, said first graphical object portion defined by said graphical data rendered by said first graphics pipeline***;
> ***said second graphics pipeline is configured to super-sample a second portion of said graphical object, said second graphical object portion defined by said graphical data rendered by said second graphics pipeline***; and
> said compositor is configured to average data values of said first and second graphical object portions and to transmit said averaged data values to said display device. (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants asserts that the alleged "pipelines" of *MacInnis* appear to independently render graphical data to different graphical windows, which are later blended by blenders 2730. See Figure 69. Thus, it appears that, for any one of the graphical windows, only one of the alleged "pipelines" renders the graphical objects that are to be displayed in the one window. In other words, it does not appear that multiple ones of the alleged "pipelines" render the ***same*** graphical object.

Therefore, even if it is assumed arguendo that the alleged "pipelines" perform "super-sampling," as alleged in the Office Action, Applicants assert that the cited art fails to suggest using different "pipelines" to super-sample different portions of the same graphical object. For at least these reasons, Applicants respectfully submit that the cited art fails to suggest at least the features of claim 4 highlighted hereinabove. Accordingly, the rejection of claim 4 under 35 U.S.C. §103 is improper and should be withdrawn, notwithstanding the allowability of claim 1.

In addition, pending claim 7 recites a "third graphics pipeline configured to receive a plurality of graphics commands ... (and) to transmit each of said graphics commands including three-dimensional graphical data to at least one of said first and second graphics pipelines."

Applicants respectfully assert that such features are not suggested by the cited art. In this regard, it is asserted in the Office Action that *MacInnis* discloses:

> "a third graphics pipeline configured to receive a plurality of graphics commands (Column 59, lines 20-23; Figure 69, Column 112, lines 24-33), said third graphics pipeline configured to transmit each of said graphics commands including three-dimensional data (Column 59, line 9) to other graphics pipelines."

As set forth hereinabove in the arguments for allowance of pending claim 1, the alleged "pipelines" shown in Figure 69 of *MacInnis* render data "independently" of each other. See column 112, line 25. There is nothing in *MacInnis* to indicate or suggest that any one of the alleged "pipelines" should transmit a graphical command to any of the other alleged "pipelines."

Further, the section of *MacInnis* at column 59, line 9, does not indicate that one alleged "pipeline" transmits graphical commands to another alleged "pipeline," as is apparently alleged in the Office Action. In this regard, in describing the operation of a ***single*** "graphics accelerator," *MacInnis* states that the "***graphics accelerator is preferably capable of 3D effects*** such as real time video warping and flipping, texture mapping, and Gouraud and Phong polygon shading, ***as well as 2D and image effects*** such as blending, scaling, blitting and filling." Column 59, lines 7-12. (Emphasis added). Thus, by virtue of the foregoing assertions, *MacInnis* appears to suggest that the ***same*** "graphics accelerator" is to perform both 2D and 3D graphical rendering. However, there is nothing in the foregoing assertions by *MacInnis* to suggest that one "accelerator" or "pipeline" is to transmit a graphical command to another "accelerator" or "pipeline."

For at least the reasons set forth above, Applicants assert that the cited art fails to suggest each of the features recited by claim 7. Accordingly, the rejection of claim 7 under 35 U.S.C. §103 is improper and should be withdrawn, notwithstanding the allowability of claim 1.

Claim 15

Claim 15 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Claim 15, as amended, reads as follows:

> 15. A graphical display system, comprising:
> ***a first pipeline means for receiving graphical data transmitted from a graphics application and for rendering said graphical data received by said first pipeline means;***
> ***a second pipeline means for receiving graphical data transmitted from said graphics application and for rendering said graphical data received by said second pipeline means;***
> a means for displaying an image; and
> a compositing means for receiving said graphical data rendered by said first pipeline means and said second pipeline means and for interfacing said graphical data received by said compositing means with said displaying means, wherein said image is based on said graphical data rendered by said first pipeline means and said graphical data rendered by said second pipeline means.
> (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants submit that the cited art fails to disclose at least the features of claim 15 highlighted hereinabove. Thus, the rejection of claim 15 under 35 U.S.C. §103 is improper and should be withdrawn.

Claims 16, 17, 33, and 34

Claims 16, 17, 33, and 34 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Applicants submit that the pending dependent claims 16, 17, 33, and 34 contain all features of their respective independent claim 15. Since claim 15 should be allowed, as argued hereinabove, pending dependent claims 16, 17, 33, and 34 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 18

Claim 18 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Claim 18, as amended, reads as follows:

> 18. A graphical display system, comprising:
> ***a first graphics pipeline configured to render a first portion of graphical data included in a graphical command;***
> ***a second graphics pipeline configured to render a second portion of graphical data included in said graphical command;***
> a display device configured to display an image; and
> a compositor configured to receive said first and second graphical data portions from said first and second graphics pipelines and to interface said first and second graphical data portions with said display device,
> wherein a first portion of said image is based on said first graphical data portion and a second portion of said image is based on said second graphical data portion, and wherein said first and second graphics pipelines render said first and second graphical data portions in parallel. (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants submit that each of the alleged "pipelines" of *MacInnis* renders graphical data to be displayed in a different window, as compared to the other alleged "pipelines." Further, there is nothing in the cited art to indicate that a single graphical command is to control graphics for multiple "windows." Therefore, Applicants respectfully assert that the Office Action fails to establish a *prima facie* case of obviousness with respect to at least the features of claim 18 highlighted hereinabove. Accordingly, Applicants request that the rejection of claim 18 be withdrawn.

Claims 19, 20, 35, and 36

Claims 19, 20, 35, and 36 presently stand rejected in the Office Action under 35 U.S.C. §102(a) as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Applicants submit that the pending dependent claims 19, 20, 35, and 36 contain all features of their respective independent claim 18. Since claim 18 should be allowed, as argued hereinabove, pending dependent claims

19, 20, 35, and 36 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 21

Claim 21 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Claim 21, as amended, reads as follows:

> 21. A method for displaying graphical images, comprising:
> ***receiving a graphical command, said graphical command including graphical data;***
> ***rendering, in parallel, a first portion of said graphical data via a first graphical pipeline and a second portion of said graphical data via a second graphical pipeline***;
> interfacing first and second rendered portions with a display device; and
> displaying, via said display device, an image based on said first and second portions of graphical data. (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 18, Applicants submit that cited art fails to disclose at least the features of claim 21 highlighted hereinabove. Thus, the rejection of claim 21 under 35 U.S.C. §103 is improper and should be withdrawn.

Claims 22-30, 37, and 38

Claims 22-30, 37, and 38 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Applicants submit that the pending dependent claims 22-30, 37, and 38 contain all features of their respective independent claim 21. Since claim 21 should be allowed, as argued hereinabove, pending dependent claims 22-30, 37, and 38 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 43

Claim 43 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Claim 43 presently reads as follows:

> 43. A graphical display system, comprising:
> a first graphics pipeline;
> a second graphics pipeline;
> ***logic configured to receive graphical data defining a three-dimensional graphical object to be displayed in a single graphical window, the logic configured to control said first graphics pipeline such that said first graphics pipeline renders, based on said graphical data, a first portion of said graphical object*** without rendering a second portion of said graphical object, ***said logic further configured to control said second graphics pipeline such that said second graphics pipeline renders, based on said graphical data, said second portion of said graphical object*** without rendering said first portion; and
> a compositor interfaced with said first and second graphics pipelines.
> (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 1, Applicants submit that each of the alleged "pipelines" of *MacInnis* renders graphical data to be displayed in a different window, as compared to the other alleged "pipelines." Thus, the cited art fails to suggest that multiple alleged "pipelines" are to render a portion of a "three-dimensional graphical object to be displayed in a single graphical window," as described by claim 43. Therefore, Applicants respectfully assert that the Office Action fails to establish a *prima facie* case of obviousness with respect to claim 43, and Applicants request that the 35 U.S.C. §103 rejection of this claim be withdrawn.

Claims 44-47

Claims 44-47 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Applicants submit that the pending dependent claims 44-47 contain all features of their respective independent claim 43. Since claim 43 should be allowed, as argued hereinabove, pending dependent claims 44-47 should be

allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 48

Claim 48 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Claim 48 presently reads as follows:

> 48. A graphical display method, comprising:
> ***receiving graphical data defining a three-dimensional graphical object to be displayed in a single graphical window***;
> ***controlling a first graphics pipeline such that said first graphics pipeline renders a first portion of said graphical object*** without rendering a second portion of said graphical object;
> ***controlling a second graphics pipeline such that said second graphics pipeline renders said second portion*** without rendering said first portion;
> compositing said first and second portions; and
> displaying a graphical image of said object based on said compositing.
> (Emphasis added).

For at least the reasons set forth hereinabove in the arguments for allowance of claim 43, Applicants submit that the cited art fails to disclose at least the features of claim 48 highlighted hereinabove. Thus, the rejection of claim 21 under 35 U.S.C. §103 is improper and should be withdrawn.

Claims 49-51

Claims 49-51 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly unpatentable over *MacInnis* in view of *Jenkins*. Applicants submit that the pending dependent claims 49-51 contain all features of their respective independent claim 48. Since claim 48 should be allowed, as argued hereinabove, pending dependent claims 49-51 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

CONCLUSION

Applicants respectfully request that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone Applicants' undersigned counsel.

Respectfully submitted ,

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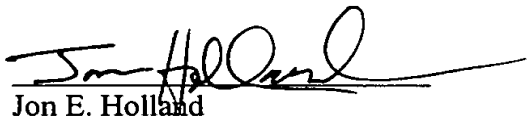
By: 

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